OHIO PUBLIC WORKS

The Ohio Public Works Commission
65 East State Street, Suite 312, Colmbus, Ohio 43215 Phone (614) 466-0880

CB16A - GRANT CB17A - LOAN

APPLICATION FOR FINANCIAL ASSISTANCE Revised 7/93

IMPORTANT: Applicant should consult the "Instructions for Completion of Project Application" for assistance in the proper completion of this form.

SUBDIVISION: <u>CITY OF CINCINNA</u>	TICODE#_ 061- 15000
DISTRICT NUMBER: 2_COUNTY: 1	<u>IAMILTON</u> DATE <u>9 / 15 /96</u>
CONTACT: KEVIN L. SIGWARD (THE PROJECT CONTACT PERSON SHOULD BE THE INDIVIDUAL WIREVIEW AND SELECTION PROCESS AND WHO CAN BEST ANSWER OF	PHONE #(513) 352-5272 FIO WILL BE AVAILABLE ON A DAY-TO-DAY BASIS DURING THE APPLICATION OR COORDINATE THE RESPONSE TO QUESTIONS)
PROJECT NAME: Columbia Parkway	Wall "D" Landslide Stabilization
SUBDIVISION TYPE FUNDING TYPE REC (Check Only 1) (Check All Requested & Enter Amount) 1. County X 1. Grant X 2. City2. Loan 3. Township3. Loan Assistance _ 4. Village MBE SET-ASII _ 5. Water/Sanitary District Construction (Section 6119 O.R.C.) Procurement	(Check Largest Component) \$998,200.00
TOTAL PROJECT COST: <u>\$1,426.000.00</u>	FUNDING REQUESTED: \$998,200.00
	ECOMMENDATION the District Committee ONLY
GRANT: \$ LOAN: \$	LOAN ASSISTANCE: \$ %TERM:yrs. (Attach Loan Supplement)
(Check Only 1)State Capical Improvement ProgramLocal Transportation Improvements ProgramSmall Government Program	DISTRICT MBE SET-ASIDE Construction \$ Procurement \$
FOR C	PWC USE ONLY
PROJECT NUMBER: C/C Local Participation % OPWC Participation % Project Release Date:/_/_ OPWC Approval:	APPROVED FUNDING:5 Loan Interest Rate: Loan Term:years Maturity Date: Date Approved://_

1.0 PROJECT FINANCIAL INFORMATION

1.1	PROJECT ESTIMATED COSTS	S:		<u> </u>	
	(Round to Nearest Dollar)				orce Account
a.)	Project Engineering Costs:			\$	\$
,	1. Preliminary Engineering	\$.00		
	2. Final Design	\$.00		
	3. Other Engineer Services *	\$.00		
	Supervision	\$.00	<u> </u>	
	Miscellaneous	\$.00		
b.)	Acquisition Expenses:				
,	1. Land	\$.00		•
	2. Right-of-Way	\$.00		
c.)	Construction Costs:	\$1,296,4	153.00		
d.)	Equipment Purchased Directly:	\$.00		
e.)	Other Direct Expenses:	\$.00		
f.)	Contingencies:		547.00		, (8.)
g.)	TOTAL ESTIMATED COSTS:	\$1,426,0	00.00		
1.2	PROJECT FINANCIAL RESOU (Round to Nearest Dollar and Percent)	JRCES:			
,	T 17 77 10 " '	Φ.			%
a.)	Local In-Kind Contributions	\$.00.		
b.)	Local Public Revenues		00.00		<u>30</u>
c.)	Local Private Revenues	\$.00	•	
d.)	Other Public Revenues	ф	00		
	1. ODOT PID#	\$.00		
	2. EPA/OWDA	\$.00		
	3. OTHER	\$.00		
SUB 7	TOTAL LOCAL RESOURCES:			\$ 427,800.00	<u>30</u>
e.)	OPWC Funds				
,	1. Grant	\$ 998,2	200.00		<u>70</u> _
	2. Loan	\$.00		
	3. Loan Assistance	\$.00		
SUB 7	TOTAL OPWC RESOURCES:			\$ 998,200.00	
f.) "Other E	TOTAL FINANCIAL RESOUR		l engineer's esti	\$1,426,000.00 mate.	100

1.3 AVAILABILITY OF LOCAL FUNDS:

Attach a summary from the <u>Chief Financial Officer</u> listed in section 5.2 listing <u>all local share funds</u> budgeted for the project and the date they are anticipated to be available.

2.0 PROJECT INFORMATION

IMPORTANT: If project is multi-jurisdictional, information must be consolidated in this section.

2.1 PROJECT NAME: Columbia Parkway Wall "D" Landslide Stabilization

2.2 BRIEF PROJECT DESCRIPTION - (Sections a through d):

a: SPECIFIC LOCATION:

South side of Columbia Parkway between Martin Drive overpass and Bains Street

PROJECT ZIP CODE: 45202

b: PROJECT COMPONENTS:

Project involves construction of 115 reinforced concrete drilled shafts which are socketed into bedrock and supported at the top by tiebacks.

c: PHYSICAL DIMENSIONS / CHARACTERISTICS:

The length of existing wall to be supported at its base by the tied-back drilled shafts is 1,131 linear feet. Estimated depth of drilled shafts varies from 30 feet to 46 feet.

d: DESIGN SERVICE CAPACITY:

IMPORTANT: Detail shall be included regarding current service capacity vs proposed service level. If road or bridge project, include ADT. If water or wastewater project, include both current residential rates based on monthly usage of 7,756 gallon per household. Attach current rate ordinance.

The existing ride is very poor due to settlement. The proposed stabilization project will correct the settlement and improve rideability.

(24-hour traffic count taken in 1990) 23,823 vehicles x 1.2 = 28,547 users

2.3 USEFUL LIFE / COST ESTIMATE: Project Useful Life: 50 Years.

Attach Registered Professional Engineer's statement, with original seal and signature certifying the project's useful life indicated above and estimated cost.

3.0 REPAIR/REPLACEMENT or NEW/EXPANSION:

TOTAL PORTION OF PROJECT State Funds Requested for Repair	\$1,426,000.00 100% \$ 998,200.00 70%	
TOTAL PORTION OF PROJECT State Funds Requested for New ar		\$
 4.0 PROJECT SCHEDUI 4.1 Engineering/Design 4.2 Bid Advertisement: 4.3 Construction: 	BEGIN DATE	END DATE 9 /1/95 5 /1/97 12/31/97

5.0 APPLICANT INFORMATION:

5.1	CHIEF EXECUTIVE OFFICER TITLE STREET CITY/ZIP PHONE FAX	John F. Shirey City Manager Room 152, City Hall 801 Plum Street Cincinnati, Ohio 45202 (513) 352 - 3241 (·)
5.2	CHIEF FINANCIAL OFFICER TITLE STREET CITY/ZIP PHONE FAX	Frank A. Dawson Finance Director Room 250, City Hall 801 Plum Street Cinci nnati, Ohio 45202 (513) 352 - 3731 ()
5.3	PROJECT MANAGER TITLE STREET CITY/ZIP PHONE FAX	Jay Gala Principal Construction Engineer Room 415, City Hall 801 Plum Street Cincinnati, Ohio 45202 (513) 352 - 3423 (513) 352 - 1581

^{*} Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be approved in writing by the Commission once the Project Agreement has been executed. Dates should assume project agreement approval/release on July 1st. of the Program Year applied for.

6.0 ATTACHMENTS/COMPLETENESS REVIEW:

Check each section below, confirming that all required information is included in this application.
A certified copy of the legislation by the governing body of the applicant authorizing a designated official to submit this application and execute contracts. (Attach)
A summary from the applicant's Chief Financial Officer listing all local share funds budgeted for the project and the date they are anticipated to be available. (Attach)
A registered professional engineer's estimate of projects useful life and cost estimate, as required in 164-1-14 and 164-1-16 of the Ohio Administrative Code. Estimates shall contain engineer's original seal and signature. (Attach)
A copy of the cooperation agreement(s) if this project involves more than one subdivision or district.(Attach)
Capital Improvements Report: (Required by 164 O.R.C. on standard form)A: Attached.
B: Report/Update Filed with the Commission within the last twelve months.
Floodplain Management Permit: Required if project is in 100 year floodplain. See Instructions.
Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), and other information to assist your district committee in ranking your project.
7.0 APPLICANT CERTIFICATION:
The undersigned certifies that: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission; (2) that to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) that all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving minority business utilization, Buy Ohio, and prevailing wages.
MPORTANT:Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement on this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding of the project.
John Shirey, City Manager
Certifying Representative (Type or Print Name and Title)
Signature/Date Signed
Commence of the second of the



September 1, 1995

SUBJECT:

Columbia Parkway Retaining Wall Stabilization

Martin Street to Bains Street

Certification of Useful Life of State Capital Projects

Improvement Programs

As required by Chapter 164-1-13 of the Ohio Administrative Code, I hereby certify that the design useful life of the subject retaining wall stabilization project is at least fifty (50) years.

WILLIAM B.
SCHRUDDE
E-034955
AFGISTERED
WILLIAM B.
SCHRUDDE
E-034955
AFGISTERED
WILLIAM B.
SCHRUDDE
E-034955
AFGISTERED
WILLIAM B.

(seal)

William B. Schrudde, PE

Project Manager KZF Incorporated

Cincinnati, Ohio 45202

KZF Incorporated 655 Eden Park Drive Cincinnati, Ohio 45202 513 621-6211 513 621-6530 FAX

Architects Engineers Interior Designers Planners

1996 RETAINING WALL STABILIZATION COLUMBIA PARKWAY WALL "D" STATE CAPITAL IMPROVEMENTS PROGRAM

		ESTIMATE			EST. UNIT	ESTIMATED
REF.	ITEM	UANTITI	ES	DESCRIPTION	PRICE	COST
1	103.05	LUMP		CONTRACT BOND		
2	201	LUMP		CONTRACT BOND	\$6,275.00	\$6,275.00
3	207		FACIL	CLEARING AND GRUBBING	\$5,000.00	\$5,000.00
4		370			\$5.00	\$1,850.00
	301	9	C.Y.	BITUMINOUS AGGREGATE BASE	\$100.00	\$900.00
5 6	404	3	C.Y.	ASPHALT CONCRETE	\$150.00	\$450.00
7	503	1,225	C.Y.	UNCLASSIFIED EXCAVATION	\$25.00	\$30,625.00
	503	LUMP		COFFERDAMS, CRIBS AND SHEETING	90.000,82	\$8,000.00
8	509	•	POUND	EPOXY COATED REINFORCING STEEL, GRADE BEA	\$0.90	\$2,286.00
9	511	12	C.Y.	CLASS S CONCRETE, GRADE BEAMS	\$300.00	\$3,600.00
10	659	3,450	S.Y.	SEEDING AND MULCHING	\$0.80	\$2,760.00
11	SPECIAL		L.F.	DRILLED SHAFT TYPE A, 36" DIA. ABOVE BEDROCK	\$92,00	\$43,700.00
12	SPECIAL	152	L.F.	DRILLED SHAFT TYPE A, 36" DIA. IN BEDROCK	\$127.00	\$19,304.00
13	SPECIAL	1,505	L.F.	DRILLED SHAFT TYPE B, 48" DIA. ABOVE BEDROCK	\$212.00	\$319,060,00
14	SPECIAL	500	L.F.	DRILLED SHAFT TYPE B, 48" DIA. IN BEDROCK	\$252.00	\$126,000.00
15	SPECIAL	447	L.F.	DRILLED SHAFT TYPE C, 36" DIA. ABOVE BEDROCK	\$92.00	\$41,124,00
16	SPECIAL	168	L.F.	DRILLED SHAFT TYPE C, 36" DIA. IN BEDROCK	\$127.00	\$21,336.00
17	SPECIAL	359	L.F.	DRILLED SHAFT TYPE D, 36" DIA. ABOVE BEDROCK	\$97.00	534,823.00
18	SPECIAL	112	L.F.	DRILLED SHAFT TYPE D, 36" DIA. IN BEDROCK	\$132.00	\$14,784,00
19	SPECIAL	209	L.F.	DRILLED SHAFT TYPE E, 36" DIA. ABOVE BEDROCK	\$87.00	518,183.00
20	SPECIAL	66	L.F.	DRILLED SHAFT TYPE E, 36" DIA. IN BEDROCK	\$122,00	\$8.052.00
21	SPECIAL	11	EACH	PERMANENT TIEBACK ANCHORS, 100 TO 150 KIPS	\$3,800,00	\$41,800,00
22	SPECIAL	35	EACH	PERMANENT TIEBACK ANCHORS, 151 TO 200 KIPS	\$4,200.00	\$147,000.00
23	SPECIAL	69	EACH	PERMANENT TIEBACK ANCHORS, 201 TO 250 KIPS	\$4,600.00	\$317,400.00
24	SPECIAL	2	EACH	TIEBACK CREEP TESTS	\$1,000.00	\$2,000.00
25	SPECIAL	6	EACH	TIEBACK PERFORMANCE TESTS	\$400.00	\$2,400.00
26	SPECIAL	107	EACH	TIEBACK PROOF TESTS	\$160.00	\$17,120.00
27	SPECIAL	LUMP		INSTRUMENTATION	\$1,000.00	\$1,000,00
28	619	LUMP		TEMPORARY FACILITIES ALLOWANCE	\$20,000.00	\$20,000.00
29	624	LUMP		MOBILIZATION	\$8,000.00	•
				THOUSE THOSE	00,000,00	\$8,000,00
				TOTAL COST =		\$1,264,832.00
				ESTIMATE REVISED 9/12/96 - ADD 2.5%		\$31,621.00
				ADJUSTED TOTAL COST =		\$1,296,453.00

W.B. SCHRÜDDE P.E. PROJECT MANAGER KZF INC. 655 EDEN PARK DR. CINCINNATI, OH 45202

SEPT. 12, 1996

WILLIAM B.
SCHRUDDE
E-034955

AFGISTERED

OFFOSIONAL ENGINEERIE

City of Cincinnati



Department of Public Works Division of Engineering

Room 440, City Hall 801 Plum Street Cincinnati, Ohio 45202

John Hamner Director

Prem Garg, P.E. City Engineer

September 27, 1996
Mr. Laurence Bicking, Director
Ohio Public Works Commission
65 East State Street
Suite 312
Columbus, Ohio 43215

RE: Status of Funds for Local Share of 1997 SCIP/LTIP Project Grants

Dear Mr. Bicking:

The local matching share for the following 1997 SCIP/LTIP Projects (Round 11 Funding) is recommended by the City Manager for funding in the City's 1997 Capital Improvement Program -

STREET REHABILITATIONS

- * Anderson Ferry Road Hillside to Corporation Line
- * Duck Creek Road Red Bank to Oaklawn
- Edwards Road Edmonson to I-71
- * Glenway Avenue Boudinot to Werk
- * Ludlow Avenue Cornell to Central Parkway
- * Madison Road Edwards to Brotherton
- * Madison Road Observatory to Edwards
- North Bend Road Colerain to West North Corp. Line
- Reading Road Dorchester to William Howard Taft
- * Rutledge/Saint Lawrence St. Williams to St. Lawrence to Rapid Run
- * Spring Grove Avenue Mitchell to North Corp. Line
- * Vine Street Paddock to North Corp. Line
- * William Howard Taft Woodburn to Vine

September 27, 1996 Mr. Laurence Bicking, Director Page -2-

STREET IMPROVEMENTS & WIDENINGS

- * Southside Avenue Improvement Phase II
- * Brighton Intersection Improvement
- * Woodford & Ridge Intersection
- * River Road Widening Mount Echo to State
- * Eastern Avenue Widening Eggleston to Bains
- * Chickering Avenue Improvement Este to Terminus

BRIDGE/STRUCTURE PROJECTS

- * Dreman Avenue over West Branch of Millcreek
- * Columbia Parkway Wall "D" Rehabilitation
- * Lehman Road Landslide Correction
- * Hillside Avenue Landslide Correction
- * Kenton Street Bridge Replacement over Florence Street
- * Gest Street Bridge Replacement over CIND Railroad, between Mehring and Third

The matching funds for these projects are coming from Street Improvement Bonds which are scheduled for sale in the early part of 1997.

If you have any questions or need additional information, please contact me at 513-352-3731.

Sincerely,

F. A. Dawson

Director of Finance

Farans

ADDITIONAL SUPPORT INFORMATION

For Program Year 1997 (July 1, 1997 through June 30, 1998), jurisdictions shall provide the following support information to help determine which projects will be funded. Information on this form must be accurate, and where called for, based on sound engineering principles. Documentation to substantiate the individual items may be required by the Support Staff if information does not appear to be accurate.

1)

2)

What is the condition of the existing infrastructure to be replaced, repaired, or expanded? For

Closed	Poor X
Fair	Good
load capacity substandard do structures, or	tement of the nature of the deficiency of the present facility such as: inadequate (bridge); surface type and width; number of lanes; structural condition; esign elements such as berm width, grades, curves, sight distances, drainage inadequate service capacity. If known, give the approximate age of the to be replaced, repaired, or expanded.
downhill due to in places exceed	Vall "D", a reinforced concrete cantilevered retaining wall, has been slipping a landslide from the time the wall was built in 1957. The total displacement, ling one foot horizontally and six inches vertically, has damaged the roadway se extent that the city must patch or resurface one or more lanes at least once
Agreement fron The Support S	funds are awarded, how soon (in weeks or months) after receiving the Project n OPWC (tentatively set for July 1, 1997) would the project be under contract? Staff will be reviewing status reports of previous projects to help judge the particular jurisdiction's anticipated project schedule.
1 month	
Are preliminar	y plans or engineering completed? <u>Yes</u> No
Are detailed co	nstruction plans completed? <u>Yes</u> No
Are all right-of-	-way and easements acquired? Yes No N/A
*Please answer	the following if applicable:
No. of parcels n N/A, perman	eeded for project: <u>0</u> Of these, how many are takes <u>N/A</u> , temporary ent <u>N/A</u>
Of a separate sh parcels not yet a	neet, explain the status of the ROW acquisition process of this project for any acquired.
Are all utility co	oordinations completed? <u>Yes</u> No N/A

3)	How will the proposed project impact the general health, safety and welfare of the service area? (Typical examples may include the effects of the completed project on accident rates, emergency response time, fire protection, health hazards, user benefits, and commerce.) Please be specific and provide documentation if necessary to substantiate the data.
	Construction of the drilled shafts and tiebacks will arrest movement of the wall, thereby elliminating the source of the rough, uneven pavement within the project limits. As noted in the attached letter, the deteriorated pavement condition has resulted in icing problems and has possibly led to some accidents over the years. This portion of Columbia Parkway is slated for pavement rehabilitation in 2000 as part of ODOT's Fort Washington Way (I-71/U.S. 50) Safety Upgrade.
4)	What type of funds are to be utilized for the local share for this project?
	Federal ODOT Local X
	MRF OWDA CD
	Other
	Note: If MRF funds are being used for the local share, the MRF application must have been filed by August 1, 1996 for this project with the Hamilton County Engineer's Office.
	The minimum amount of matching funds for grant projects (local share) must be at least 10% of the TOTAL CONSTRUCTION COST. What percentage of matching funds are being committed to this project?
	_30%
5)	Has any formal action by a federal, state, or local government agency resulted in a complete or partial ban of the use or expansion of use for the involved infrastructure? (Typical examples include weight limits, truck restrictions, and moratoriums or limitations on issuance of building permits.) A copy of the legislation must be submitted with the application. THE BAN MUST HAVE AN ENGINEERING JUSTIFICATION TO BE VALID.
	Complete Ban Partial Ban No Ban X
	Will the ban be removed after the project is completed?
	Yes No

	ADT = 28,587 (1990)
	For roads and bridges, multiply current <u>documented</u> Average Daily Traffic by 1.20. For public transit, submit documentation substantiating the count. Where the facility currently has any restrictions or is partially closed, use documented traffic counts prior to the restriction. For storm sewers, sanitary sewers, water lines, and other related facilities, multiply the number of households in the service area by 4.
7)	Has the jurisdiction developed a Five Year Capital Improvement Plan as required in O.R.C., chapter 164? (This must be included with the application to be considered for funding.)
	Yes <u>X</u> No
8)	Give a brief statement concerning the regional significance of the infrastructure to be replaced, repaired, or expanded.
	Columbia Parkway serves as the primary route linking downtown, the eastern riverfront areas of the city, and the eastern suburbs of Hamilton County. Together with the other sections of U.S. 50 (Wooster Pike to the east, Ft. Washington Way/Sixth Street Expy./River Road to the west), it functions as the only multiple-lane facility other than I-275 which runs from the Indiana State Line to the Clermont County Line.
9)	For expansion projects, please provide the existing and proposed Level of Service (LOS) of the facility using the methodology outlined within AASHTO's "Geometric Design of Highways and Streets" and the 1985 Highway Capacity Manual.
	Existing LOS Proposed LOS
	If the proposed LOS is not "C" or better, explain why LOS "C" cannot be achieved. (Attach separate sheets if necessary.)

* TRAFFIC COUNTS

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Direction : NORTHBOUND

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PAGE: 1 FILE: 90-0395

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P.H.F.	0.87	0.87		0.90	ŧ		ŧ	٠		0.90	0.37		

SITE CODE : 00001926

P.H.F.

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461

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2418

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TRAFFIC COUNTS

Location : FROM E ON COLUMBIA PKHY

PAGE: 1 FILE: 90-0395

2418

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D. Chang, FHWA - Columbus
D. Chang, FHWA - Columbus
M. Grunder, ODOT - Columbus
D. Melick, ODOT - Columbus
G. Rowe, Dir. Public Works
T.E. Young, P.E., City Engineer
R.L. Cordes, P.E., Highway Eng.
G.C. Hartman, P.E., Struct.
T.M. Jamison, P.E., Struct.
K.J. Stammer, P.E., Struct.
Struct. File
Admin. File

TEY-Div. File #5340

September 7, 1990

Mr. Lloyd Wallace, P.E. District Deputy Director ODOT, District 8 P.O. Box 272 Lebanon, Ohio 45036-0272

RE: COLUMBIA PARKHAY HALL "D" STABILIZATION HAM - 71/50-0.52/21.77

Dear Mr. Wallace:

The City offers the following response to ODOT's May 24, 1990 letter which stated that in your opinion stabilization of Wall "D" is not warranted at this time. This, in our opinion, is unacceptable since \$53 million has and is being spent to improve conditions and safety on the Parkway along its entire length of 8 miles from Pike Street and I-71 to Mariemont. We believe that the full width section of Columbia Parkway adjacent: to Wall "D" will continue to be a maintenance problem unless the wall is stabilized with this project.

As discussed in our letter of February 6, 1990, we recommend that the stabilization of Wall "D" be included in this project. Although the H.C. Nutting company did not specifically recommend that Wall "D" be stabilized, we did not expect them to address the issue since the decision involves issues of highway safety and maintenance costs as well as geotechnical factors.

Even though the rate of movement at the wall is slow, we have had continual maintenance problems and expect no change in this situation without stabilization. Our Highway Maintenance Division has reported that this area has undergone numerous patches and overlays. Of primary concern is the frequent ponding of water which results in icing problems in the winter. These problems will continue in the future along with problems with the proposed safety barrier without proper stabilization. We estimate that the barrier will become ineffective (due to a 3 inch drop) in approximately thirteen years assuming no change in the current rate of movement.

Lloyd Wallace

COLUMBIA PARKWAY WALL "D" STABILIZATION

September 7, 1990

Page -2-

The long term safety of the highway is our primary concern. In spite of the patches and overlays a review of the 1989 traffic records revealed 16 accidents in this area. Although most of the accidents involved driver error, four of the accidents involved loss of driver control or no driver error. The very irregular cross slopes could very well be the cause of some accidents.

Very truly yours,

T.E. Young, P.E. City Engineer

INTRODUCTION

This report summarizes the findings and recommendations we have developed in recent geotechnical explorations and analyses with respect to stabilization of Wall "D" along Columbia Parkway in Cincinnati, Ohio. This work included two additional test borings near the east end of the retaining wall, extraction of cores through the Columbia Parkway pavement, analysis of data developed in previously installed inclinometers, review of performance records of instrumented piers along Columbia Parkway and elsewhere, geotechnical calculations, and preparation of recommendations for use in the design of stabilizing measures.

A comprehensive geotechnical investigation was performed in 1989 along the downhill side of Retaining Wall "D". This investigation included drilling of six test borings, installation of inclinometers into these borings, laboratory tests on recovered samples, and geotechnical analysis and findings. Refer to the report dated December 18, 1989, for details concerning the history of the retaining wall, a description of the general site geology and detailed subsurface conditions, and geotechnical analysis which served as the basis of the findings and recommendations presented in 1989.

WALL MOVEMENT AND INCLINOMETER OBSERVATIONS

Optical observations of the top of the retaining wall during the period of 1957 to 1985 revealed horizontal movements of as much as 1 ft. and settlement in excess of 0.5 ft. in the central portion of the wall between approximately Stations 68+00 and 70+00. Observations of the pavement of Columbia Parkway showed settlement and distortions of a magnitude consistent with the observed and measured movement of the retaining wall.

It was concluded in 1989 that the observed horizontal movement of the retaining wall and the settlement and distortion of Columbia Parkway paving were the result of accelerated creep, of a deposit of very stiff clay which provides the direct support to the retaining wall, along the contact between the clay and underlying shale bedrock.

Readings of inclinometers installed in borings 1 through 5, starting in June of 1989 and continuing through October of 1994, confirm that the primary zone of movement is within the bottom several feet of the clay deposit on top of the shale bedrock. The inclinometer in boring B-5 at Station 71+02 shows movement on top of the shale, but larger strain is shown 10 to 15 ft. above the shale. This inclinometer also had the greatest amount of movement, in excess of 2" in the 5-year period during which monitoring was performed.

The inclinometers in borings B-1 and B-2, at Stations 61+56 and 63+08, respectively, revealed substantially lower amounts of movement than the three inclinometers located east of the Martin Street abutment.

ADDITIONAL TEST BORINGS

The most easterly test boring made in 1989 was at Station 73+00, approximately 350 ft. west of the east end of the retaining wall. Significant wall movement and pavement distortion continues past Station 75+00 where there is an existing 72" stone sewer which follows the general alignment of a major drainage course through the hillside on the north side of Columbia Parkway, under the roadway and the retaining wall, and along the alignment of Collard Street. Accordingly, two additional test borings have been made as a part of this study, one just east of the existing 72" sewer at Station 75+01 and another just east of the east end of the wall at Station 76+63.

The logs of these two borings, identified as B-7 and B-8, are included in the appendix.

An analysis of these borings, together with the 1989 borings, indicates a significant dip in the top of bedrock under the valley area centered on approximately Station 75+00 with the bedrock then rising to the east. This rise in the surface of bedrock is consistent with exploration made just east of Bains Street. An evaluation of the samples obtained in boring B-7, near the 72" sewer, suggests that the plane of movement at this location is probably near elevation 500.0 or approximately 8 to 10 ft. above the top of bedrock.

PAVEMENT CORES .

Seven cores were extracted from the pavement of Columbia Parkway as a part of this investigation. The primary objective of this core drilling was to determine the thickness of asphaltic concrete overlay above the primary Portland Cement Concrete pavement. This data, combined with an existing elevation survey of the pavement, provides an estimate of the aggregate settlement of the pavement below the elevation at which it was constructed. This settlement reflects the vertical component of the translation of the clay deposit supporting the retaining wall along the inclined surface of the bedrock. Cores were also carried through the Portland Cement Concrete and a determination made of the type of base material and the presence of any void between the bottom of the concrete slab and the base. A small void was indicated at only one of the seven locations tested. The data developed in the pavement core drilling is summarized in Table I in the appendix.

GENERAL RECOMMENDATIONS

We reaffirm our 1989 recommendation that a line of drilled piers be installed on the downhill side of Retaining Wall "D" to stop or at least materially slow the creep movement of the clay deposit over the shale bedrock. This continued creep movement is resulting in translation of the retaining wall and settlement and distortion of the pavement of Columbia Parkway. An evaluation of all of the monitoring data, including optical observations of the top of the wall and inclinometer readings, combined with visual evaluation of the Columbia Parkway pavement, suggests that the drilled piers should start at approximately Station 65+10, immediately east of the Martin Street ramp, and extend to the east end of the wall at approximately Station 76+50, for a total distance of approximately 1150 ft. It is recommended that, in general, the piers be 36" diameter constructed at a spacing of 10 ft. on center. A larger diameter pier may be needed where the distance between the bottom of footing and top of rock is greatest. It is recommended that the piers be located close to the front face of the existing wall footing without actual contact between the pier and the footing. The piers should be socketed to 8 to 10 ft. below the top of bedrock and a single row of tiebacks installed through each pier at a depth of approximately 3 ft. below the bottom of the existing retaining wall footing. We are no longer recommending that

March 16, 1995

Ms. Cathy Concilla District 2 Program Representative Ohio Public Works Commission 65 East State Street, Suite 312 Columbus, Ohio 43215

Dear Cathy,

SUBJECT: COLUMBIA PARKWAY WALL "D" STABILIZATION

Thank you for taking the time to investigate the suitability of the city's proposed Columbia Parkway Wall "D" Stabilization project for funding under the S.C.I.P. program. In our phone conversation last week, I mentioned the wall was built in 1957 to accommodate construction of an additional lane for Columbia Parkway (U.S. 50). While the wall itself is structurally sound, it has gradually crept downhill since its construction, resulting in a continual maintenance problem on one of Cincinnati's most heavily travelled thoroughfares. The city has monitored the wall's movement since 1957, and data from the five inclinometers installed below the wall show no signs of abatement. To date, the Ohio Department of Transportation has declined to include the stabilization of Wall "D" in the scope of work for the Fort Washington Way (I-71/U.S. 50) Safety Upgrade; therefore, the city has decided to seek alternate means for funding the project.

My purpose in securing OPWC's opinion on the project's viability stems from a preference for limiting the city's scope of work to wall stabilization, i.e., not including pavement rehabilitation in the scope of work. Whereas ODOT has not been willing to include the wall in the Ft. Washington Way scope, the ODOT scope does include resurfacing the portion of Columbia Parkway supported by Wall "D." Therefore, as long as the wall could be expected to receive the same point ratings as the roadway with respect to condition, health/safety/welfare, daily users and regional impact, I believe it would be advisable to limit the city's scope of work to stabilizing Wall "D." I understood OPWC's opinion to be that the wall should be rated identically to the roadway in those respects. If I have misinterpreted your comments, or if there is a change in how OPWC regards this matter, please contact me at once. I may be reached at (513) 352-5272. The city's Department of Public Works appreciates your assistance in clarifying this issue.

Sincerely,

Kevin L. Sigward, P.E. Senior Engineer

cc: R. Cline, Engineering/Highways; T. Jamison/K. Sigward, Structures; KSC-Struct. File; Admin. File; PKG-Div. File #5340

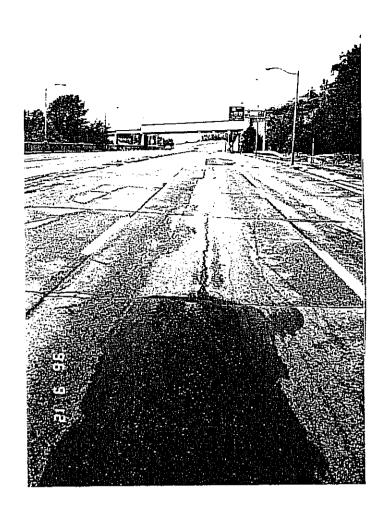
CERTIFICATION OF TRAFFIC COUNT

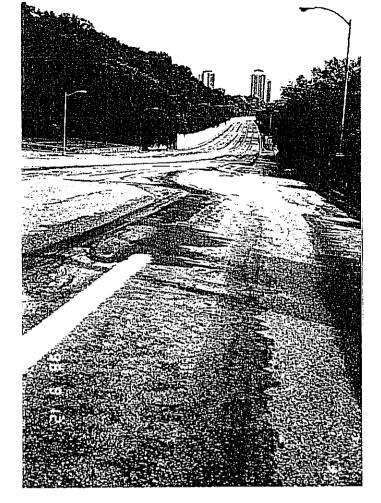
As required by the District 2 Integrating Committee, I hereby certify that the traffic counts herein attached to the <u>Columbia Parkway Wall D</u> project application are a true and accurate count done by the City of Cincinnati's Traffic Engineering Division.

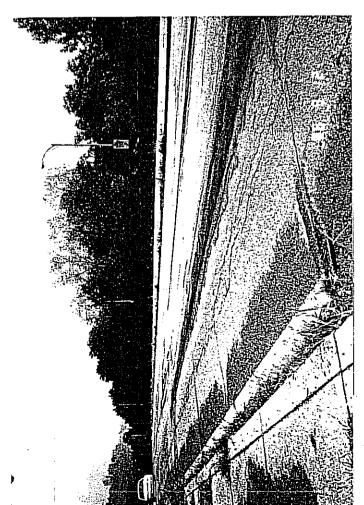
Stephen I. Niemeier, P.E.

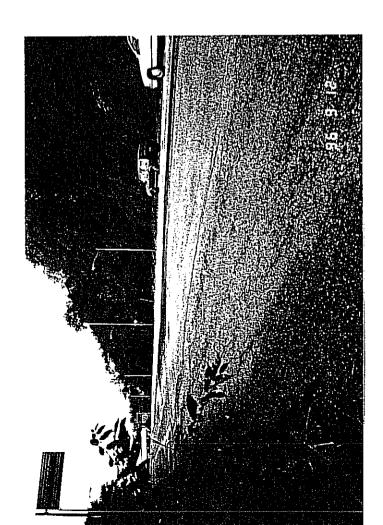
Supervising Engineer

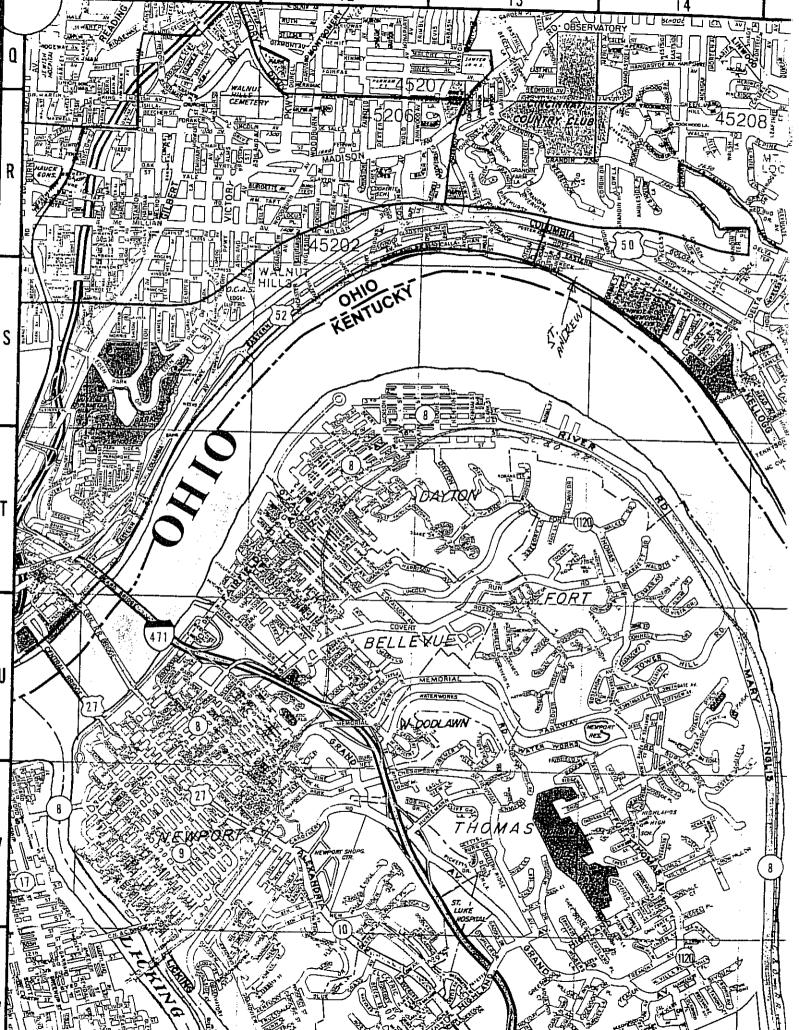












SCIP/LTIP PROGRAM ROUND 11 - PROGRAM YEAR 1997 PROJECT SELECTION CRITERIA JULY 1, 1997 TO JUNE 30, 1998

ADOPTED BY THE INTEGRATING COMMITTEE May 24, 1996

	JURISDICTIO	ON/AGENCY: (, say of the	
	NAME OF PRO	DJECT:	
	PRELIMINARY	SCORE FOR THIS PROJECT:	177
	FINAL SCORE	FOR THIS PROJECT:	14
	RATING TEAM	t: <u>4</u>	15
-)	If <i>SCIP/LTI</i> contract be	P funds are granted, when would the construction awarded?	
	10 Points -	Will be under contract by end of 1997 and no delinquent projects in Rounds 8 & 9.	
	5 Points -	Will be under contract by March 30, 1998 and/or jurisdiction has had one delinquent project in Rounds 8 & 9.	
	0 Points -	Will not be under contract by March 30, 1998 and jurisdiction has had more than one delinquent prin Rounds 8 & 9.	i/or coject
)	What is the to be replace	physical condition of the existing infrastructured or repaired?	re
	10 Points - 5 Points -	Critical Very Poor	

NOTE: If the infrastructure is in "good" or better condition, it will \underbrace{NOT} be considered for SCIP/LTIP funding unless it is an expansion project that will improve serviceability.

- 3) If the project is built, what will be its effect on the facility's serviceability? Documentation is required.
 - 5 Points Project design is for future demand.
 - 4 Points Project design is for partial future demand.
 - 3 Points Project design is for current demand.
 - 2 Points Project design is for minimal increase in capacity.
 - 1 Point Project design is for no increase in capacity.



- 4) How important is the project to HEALTH, SAFETY, AND WELFARE of the public and the citizens of the District and/or service area?
 - 10 Points Highly significant importance, with substantial impact on all 3 factors.

4

- 8 Points Considerably significant importance, with substantial impact on 2 factors, or noticeable impact on all 3 factors.
- 6 Points Moderate importance, with substantial impact on 1 factor or noticeable impact on 2 factors.
- 4 Points Minimal importance, with noticeable impact on 1 factor
- 2 Points No measurable impact
- 5) What is the overall economic health of the jurisdiction?
 - 10 Points
 - 8 Points
 - 6 Points
 - 4 Points
 - 2 Points
- 6) What matching funds are being committed to the project, expressed as as a percentage of the TOTAL CONSTRUCTION COST? Loan and Credit Enhancement projects automatically receive 5 points, and no match is required. All grant funded projects require a minimum of 10% matching funds.
 - 5 Points 50% or more
 - 4 Points 40% to 49.99%
 - 3 Points 30% to 39.99%
 - 2 Points 20% to 29,99%
 - 1 Point 10% to 19.99%

- 7) Has any formal action by a federal, state, or local government agency resulted in a partial or complete ban of the usage or expansion of the usage for the involved infrastructure? POINTS MAY ONLY BE AWARDED IF THE END RESULT OF THE PROJECT WILL CAUSE THE BAN TO BE LIFTED.
 - 5 Points Complete ban 3 Points - Partial ban
 - O Points No ban of any kind
- What is the total number of existing daily users that will benefit as a result of the proposed project? Appropriate criteria include current traffic counts, households served, when converted to a measurement of persons. Public transit users are permitted to be counted for the roads and bridges, but only when certifiable ridership figures are provided.
 - 5 Points 16,000 or more
 - 4 Points 12,000 to 15,999
 - 3 Points 8,000 to 11,999
 - 2 Points 4,000 to 7,999
 - 1 Point 3,999 and under
- 9) Does the infrastructure have regional impact? Consider originations and destinations of traffic, functional classifications, size of service area, number of jurisdictions served, etc.
 - 5 Points Major impact
 - 4 Points -
 - 3 Points Moderate impact
 - 2 Points -
 - 1 Point Minimal or no impact
- 10) Has the jurisdiction enacted the optional \$5 license plate fee, an infrastructure levy, a user fee, or a dedicated tax for infrastructure and provided certification of which fees have been enacted?
 - 5 Points Two of the above
 - 3 Points One of the above
 - 0 Points None of the above

ADDENDUM TO THE RATING SYSTEM DEFINITIONS/CLARIFICATIONS

Criterion 1 - ABILITY TO PROCEED

The Support Staff will assign points based on engineering experience and OPWC defined delinquent projects. A project is considered delinquent when it has not received a notice to proceed within the time stated on the original application and no time extension has been granted by the OPWC. A jurisdiction receiving approval for a project and subsequently cancelling the same after the bid date on the application may be considered as having a delinquent project.

Criterion 2 - CONDITION

Condition is based on the amount of deterioration that is field verified or documented exclusive of capacity, serviceability, or health, safety and welfare issues. Condition is rated only on the existing facility being repaired or abandoned. If the existing facility is not being abandoned or repaired, but a new facility is being built, it shall be considered as an expansion project. (Documentation may include ODOT BR-86 reports, pavement management condition reports, televised underground system reports, age inventory reports, maintenance records, etc., and will only be considered if included with the original application.)

Definitions:

<u>FAILED CONDITION</u> - Requires complete reconstruction where no part of the existing facility is salvageable. (e.g. Roads: complete reconstruction of roadway, curbs and base; Bridges: complete removal and replacement of bridge; Underground: removal and replacement of an underground drainage or water system; Hydrants: completely non-functioning and replacement parts are unavailable.)

<u>CRITICAL CONDITION</u> - Requires moderate or partial reconstruction to maintain integrity. (e.g. Roads: reconstruction of roadway, curbs can be saved; Bridges: removal and replacement of bridge with abutment modification; Underground: removal and replacement of part of an underground drainage or water system; Hydrants: some non-functioning, others obsolete and replacement parts are unavailable.)

<u>VERY POOR CONDITION</u> - Requires <u>extensive</u> rehabilitation to maintain integrity. (e.g. Roads: extensive full depth, partial depth and curb repair of a roadway with a structural overlay; Bridges: superstructure replacement; Underground: repair of joints and/or minor replacement of pipe sections; Hydrants: non-functioning and replacement parts are available.)

<u>POOR CONDITION</u> - Requires standard rehabilitation to maintain integrity. (e.g. Roads: moderate full depth, partial depth and curb repair to a roadway with no structural overlay needed or structural overlay with minor repairs to a roadway needed; Bridges: extensive patching of substructure and replacement of deck; Underground: insituform or other in ground repairs; Hydrants: functional, but leaking and replacement parts are unavailable.)

MODERATELY POOR CONDITION - Requires minor rehabilitation to maintain integrity. (e.g. Roads: minor full depth, partial depth or curb repairs to a roadway with either a thin overlay or no overlay needed; Bridges: major structural patching and/or major deck repair; Hydrants: functional and replacement parts are available.)

MODERATELY FAIR CONDITION - Requires extensive maintenance to maintain integrity. (e.g. Roads: thin or no overlay with extensive crack sealing, minor partial depth and/or slurry or rejuvenation; Bridges: minor structural patching, deck repair, erosion control.)

<u>FAIR CONDITION</u> - Requires routine maintenance to maintain integrity. (e.g. Roads: slurry seal, rejuvenation or routine crack sealing to the roadway; Bridges: minor structural patching.)

GOOD OR BETTER CONDITION - Little or no maintenance required to maintain integrity.

Criterion 4 - HEALTH, SAFETY & WELFARE

Definitions:

SAFETY - The design of the project will prevent accidents, promote safer conditions, and eliminate or reduce the danger of risk, liability, or injury.

EXAMPLES: Widening existing roadway lanes to standard lane widths; Adding lanes to a roadway or bridge to increase capacity or alleviate congestion; replacing old or non-functioning hydrants; increasing capacity to a water system, etc.

<u>HEALTH</u> - The design of the project will improve the overall condition of the facility so as to reduce or eliminate disease; or correct concerns regarding the environmental health of the area.

EXAMPLES: Improving or adding storm drainage or sanitary facilities; replacing lead joints in water lines;

 ${\underline{\mathtt{WELFARE}}}$ - The design of the project will promote economic well-being and prosperity.

EXAMPLES: Project has the potential to improve business expansions or opportunities in the area; project will improve the quality of life in the area;

<u>PLEASE NOTE:</u> The examples listed above are NOT a complete list, but only a small sampling of situations that may be relevant to any given project. Each project is looked at on an individual basis to determine if any aspects of this rating category apply.

Criterion 9 - REGIONAL IMPACT

Definitions:

MAJOR IMPACT - Roads: major multi-jurisdictional route, primary feed to an interstate, Federal Aid Primary routes; Underground: primary water or sewer main serving and entire system; Hydrants: multi-jurisdictional.

MODERATE IMPACT - Roads: principal thoroughfares, Federal Aid Urban routes; Underground: primary water or sewer main serving only part of a system; Hydrants: all hydrants in a local system serving only one jurisdiction.

MINIMAL/NO IMPACT - Roads: cul-de-sacs, subdivision streets; Underground: individual water or sewer main not part of a large system; Hydrants: only some hydrants in a local system serving only one jurisdiction.